

REMARKS

In the May 6, 2004 Office Action, the Examiner noted that claims 1-46 were pending in the application; noted that the specification referred to references that had not been submitted in an Information Disclosure Statement; objected to the drawings under 37 CFR § 1.84(p)(5); objected to the Abstract, citing MPEP § 608.01(b); objected to the specification under 37 CFR § 1.75(d)(1); objected to claims 3, 7, 8, 15, 16, 20, 29, 30 and 46 due to informalities; rejected claims 1, 2, 21, 23, 24, 31 and 32 under USC § 102(b); rejected claims 12, 17, 18, 40, 41 and 43-46 under 35 USC § 103(a); and objected to claims 3-11, 14-16, 19, 20, 22, 25-30, 33-39 and 42 as dependent upon rejected base claims, but otherwise allowable. In rejecting the claims, U.S. Patents 5,581,658 to O'Hagan et al. and 4,677,466 to Lert, Jr. et al. (References E and F, respectively) and articles by Pfeiffer et al. and McNab et al. (References U and V, respectively) were cited. Claims 1-46 remain in the case. The Examiner's objections and rejections are traversed below.

The Application

The application is directed to finding a match in a database for a file, particularly a recording containing sampled values or sampled digital data, as found on a compact disc, in an MP3 file, etc. The database is searched for at least one matching record using file characteristics, specifically information that is based on contents of the file and the size of the file, e.g., the length(s) of recording(s), such as the tracks on a compact disc. In addition, the number of tracks can be used in the case of a compact disc or other storage medium that stores more than one recording or other file. In the case of a recording, the information derived from the contents of the file may be a signature array where each element corresponds to a number of occurrences of sampled digital data within a value band. An approximate match in the database may be identified by calculating average differences between the elements of the signature array for the file and existing signature arrays stored in the database for corresponding recordings and identifying as a possible match any record in the database for which the average difference is less than a predetermined value.

The Prior Art

Article by Pfeiffer et al.

The Pfeiffer et al. article is directed to automatic audio content analysis for any type of audio: silence, speech, music and other sounds. In the case of music, Pfeiffer et al. teach "segmentation of musical harmony (chords) ... by analyzing the spectrum and retrieving regularities"

(page 24, section 3.3.2, first paragraph, lines 7-9) and then performing "a fundamental frequency (fuf) determination on the chords as a first step toward note analysis" (page 24, section 3.3.2, second paragraph, lines 1-3). A piece of music is then compressed into "a sequence of fundamental frequencies (fufs) ... to produce a *characteristic signature*" (page 25, section 4.1, first paragraph, lines 1-3) which is used for "fuf recognition" (page 25, column 2, last line). In the experimentation reported by Pfeiffer et al., a database of 100 recordings was used to identify 27 new recordings (17 of which were in the database) using 3 techniques: 10 FFT analysis indicators without use of windows, 10 FFT analysis indicators using a Hanning window and 10 fuf analysis indicators. By using all three and defining a match as having a similarity percentage of 85%, the 17 recordings were all identified.

U.S. Patent 5,581,658 to O'Hagan et al.

The O'Hagan et al. patent is directed to automatic identification of broadcast performances of musical works, commercials, etc. In rejecting the claims, only descriptions of the prior art in columns 2 and 5 and one line of a claim were cited. These cited portions describe prior art extraction of a signature from a broadcast signal for use in identification of the broadcast work by comparing it to an existing set of signatures, obtaining audio spectrum signals 36 using band pass filters and using a signature and recognition post-processing unit 64 to compare extracted signatures with reference signatures (not in real time). The claim limitation refers to "amplitude samples of ... [a] signal portion" (column 16, line 57).

U.S. Patent 4,677,466 to Lert, Jr. et al.

The Lert, Jr. et al. patent is one of the prior art references described in O'Hagan et al. The portions cited in Lert, Jr. et al. are part of the description of calculating an average value of the difference of each sample of a current frame and an immediately prior frame, averaging these values, obtaining the absolute value of the average and comparing that with a predetermined threshold value to determine whether "a sudden scene change has occurred" (column 8, lines 49-50).

Article by McNab et al.

The McNab et al. article describes a goal of a system which can identify "all melodies containing ... [a] sequence of notes" (page 11, column 2, line 8) sung by a user. The article contains a description of the state of the art in single processing for melody transcription and how to match user input against a database. Although the May 6, 2004 Office Action cited McNab et al. as disclosing "a server to handle the database for remote listening" (Office Action,

page 12, lines 6-7) in the third "paragraph of the Conclusion section" on page 18 of McNab et al., no reference to remote listening has been found in the cited portion of McNab et al..

Information Disclosure Statement

In item 1 on page 2 of the Office Action, the Examiner noted that the references mentioned in the specification had not been submitted in an Information Disclosure Statement. An Information Disclosure Statement is attached to submit copies of three of the four references and the Table of Contents of the fourth, *HTML 3.2 and CGI Unleashed*. These references provide background information regarding protocol and language specifications of the Internet. If the Examiner finds anything in the Table of Contents of *HTML 3.2 and CGI Unleashed* that suggests some portion is relevant to the claims, a copy of that portion of the book will be submitted.

Objection to the Drawings

In item 2 on page 2 of the Office Action, the Examiner objected to the drawings, because reference numerals 205 and 335 were not used in the specification. In response, the specification has been amended to add these numerals. In addition, formal drawings for FIGS. 1-3 are submitted herewith. Acceptance of the formal drawings is respectfully requested.

Objection to the Abstract

In item 3 on page 3 of the Office Action, the Examiner objected to the Abstract citing MPEP § 608.01(b). After the filing of the application on September 8, 2000, 37 CFR § 1.72(b) was amended to shorten the maximum length of an Abstract from 250 words to 150 words. The Abstract has been amended in accordance with the amended rule.

Objection to the Specification

In item 4 on page 3 of the Office Action, the Examiner objected to the specification "as failing to provide proper antecedent basis for the claimed subject matter" citing 37 CFR § 1.75(d)(1) and MPEP § 608.01(o). The objections were grouped to refer to three phrases used in the claims. Each phrase is addressed below.

Claims 9, 17, 27, 37, 43 and 45

With respect to claims 9, 17, 27, 37, 43 and 45, the Examiner noted that the phrase "removable storage media possessed by the user" (e.g., claim 9, line 2) is used. The Examiner then noted that "the specification is silent as to ownership" (Office Action, page 3, line 7). Applicants note that the phrase quoted above from claim 9 is also "silent as to ownership" and

only refers to possession. Thus, it is irrelevant whether the removable media was purchased, rented, or obtained by loan or other means. Furthermore, the claims are silent with regard to the content of the media. The claims only require that the removable media is in the possession of the user.

Although no form of the word “possessed” is used in the specification, possession of a compact disc is inherent in the statement that “the user place[s] in his or her CD drive a particular CD” (page 13, line 5), where it is clear in the paragraph at the top of page 3 that the abbreviation “CD” refers to other types of removable media, besides a compact disc. Therefore, as indicated on page 3, line 8 of the Office Action, “ownership is not relevant.”

Claims 10, 18, 28, 38 and 44

With respect to claims 10, 18, 28, 38 and 44, the Examiner noted that these claims include the limitation that “recordings are digital files stored on mass storage accessible by a listener of the selected recording” (e.g., claim 10, lines 1-2). This limitation only requires that the “mass storage [is] accessible by a listener of this selected recording” and contains no statement regarding how or by whom the files were stored. As noted by the Examiner, by definition a listener of a selected recording must have access to mass storage if the listener is listening to one of “the recordings [that] are digital files stored on [the] mass storage” (claim 10, lines 1-2). Since the claims were not rejected under the first paragraph of 35 USC § 112, it is understood that the Examiner finds claims 10, 18, 28, 38 and 44 to be fully supported by the specification.

Claims 20, 30 and 46

With respect to claims 20, 30 and 46, the Examiner indicated that “sending information ‘not included in the selection’” (Office Action, page 3, line 15) was “affirmed by the specification” (Office Action, page 3, line 16). Applicants agree that the specification provides support for this limitation. However, the interpretation of this limitation as “information pertaining to the recording, that is stored with the recording on the database” (Office Action, page 3, last two lines) is inconsistent with the specification and not intended by the Applicants.

First, there is nothing in claims 20, 30 or 46, or the claims from which they depend reciting that the recording is stored in the database; therefore, it is inappropriate to refer to “information … that is stored with the recording on the database” (Office Action, page 3, last two lines, emphasis added). Second, there is nothing in claims 20, 30 or 46 limiting the “additional information stored in the at least one approximately matching record” (e.g., claim 20, lines 2-3) as “pertaining to the recording” (Office Action, page 3, last two lines).

The last paragraph on page 12 and the first paragraph on page 13 of the application describe a number of ways in which an identifier corresponding to a CD can be used to obtain information from the Internet. Included as examples are "the names of the songs, ... photographs (e.g., of the band), artwork, animations, and video clips" (page 12, lines 21-22), which may be obtained directly from the database or from a web page at "a Web address (URL)" (page 12, line 20), where only the address is stored in the database. A person of ordinary skill in the art would be aware that conventionally CDs do not contain such information and thus, this would be "additional information ... not included in the selected recording" (e.g., claim 20, lines 2-3).

If there was a typographical error on line 16 of page 3 in the Office Action and it was intended by the Examiner to assert that the negative limitation recited in claims 20, 30 and 46 was not supported by the specification, Applicants respectfully disagree. As discussed above, one of ordinary skill in the art would consider the words that appear in claims 20, 30 and 46 as an alternative way of expressing what is described in the specification. It is submitted that there is no need to interpret claims 20, 30 and 46 as having any additional or fewer limitations than what appear therein.

For the above reasons, withdrawal of the objections to the specification in item 4 of the Office Action is respectfully requested.

New Title of the Application

In item 5 on page 4 of the Office Action, the Examiner required a new title. The title of the application has been amended, but not as suggested by the Examiner, because the word "waveforms" has been removed from the claims. The amended title reflects the language used in claim 1 as amended.

Objections to the Claims

In item 6 on page 4 of the Office Action, the Examiner objected to claims 3, 7, 8, 15, 16, 20, 29, 30 and 46 due to informalities. Claims 3, 7, 8, 15, 16 and 29 have been amended in response to this objection. However, it is noted that the word "approximately" was not found in claim 29 and thus, the amendments to claim 29 only address the use of the word "temporarily".

With respect to use of the words "approximately" and "not" in claims 20, 30 and 46, it is submitted that no changes are required. The support in the specification for use of the word "not" in claims 20, 30 and 46 was discussed above. Furthermore, contrary to the next-to-last sentence on page 4 of the Office Action, § 2173.05(i) in the current version of the MPEP (8th Edition, Rev. 2, May 2004) states that "[t]he current view of the courts is that there is nothing

inherently ambiguous or uncertain about a negative limitation. So long as the boundaries of the patent protection sought are set forth definitely, albeit negatively, the claim complies with the requirements of 35 U.S.C. 112, second paragraph."

Use of the word "approximately" in claims 20, 30 and 46 is consistent with the specification. There is little difference between the meaning of "approximately" and "substantially" with respect to a percentage; therefore, claims 7, 8, 15 and 16 were amended as suggested by the Examiner. However, it is submitted that the term "substantially" is not "standard" (Office Action, page 4, line 10) for use as an adverb with "matching", while "approximately" is commonly used. Therefore, "approximately" has been retained in claims 20, 30 and 46.

For the above reasons, it is submitted that no further amendments to the claims should be required and the objections for informality should be withdrawn. If the Examiner disagrees, the Examiner is respectfully requested to contact the undersigned by telephone to arrange an Examiner Interview prior to the next Office Action, so that acceptable language can be developed before the claims are examined further.

Rejections under 35 U.S.C. § 102

In items 7-11 on pages 5-8 of the Office Action, claims 1, 2, 21, 23, 24, 31 and 32 were rejected under 35 U.S.C. § 102(b) as anticipated by Pfeiffer et al. Of these claims, claims 1, 21 and 31 are independent. Claims 1 and 31 have been amended to recite "determining at least one matching record in the database for the at least one selected file based on the sample values and size of the at least one selected file" (e.g., claim 1, last three lines), while claim 21 has been amended to recite that the determination is "based on the length of the selected recording and comparison of the identifying sample values with the existing sample values in the database" (claim 21, last three lines). In item 25 on pages 13-14 in the description of allowable subject matter, the Examiner indicated that basing the determination on "number and length of each track of recordings" as recited in claims 3, 22 and 33 distinguished over the prior art. Therefore, it is submitted that claims 1, 21 and 31, as well as claims 2, 23, 14 and 32 which depend therefrom patentably distinguish over the prior art for the reasons recognized by the Examiner in indicating that claims 3, 22, and 33 were allowable.

Rejections under 35 U.S.C. § 103

In items 12-23 on pages 8-12 of the Office Action, claims 12, 13, 17, 18, 40, 41 and 43-46 were rejected under 35 U.S.C. § 103 as unpatentable over Pfeiffer et al. combined with one or more of O'Hagan et al.; Lert, Jr. et al.; and McNab et al. Claims 12 and 13 depend from claim

1 and claims 40, 41 and 43-46 depend from claim 31; therefore, it is submitted that claims 12, 13, 40, 41 and 43-46 patentably distinguish over the prior art for the reasons discussed above with respect to claims 1 and 31. Claims 17 and 18 have been amended to depend from claim 14 which was indicated as allowable over the prior art; therefore, it is submitted that claims 17 and 18 are allowable over the prior art.

Allowable Subject Matter

In item 24 on page 13 of the Office Action, the Examiner objected to claims 3-11, 14-16, 19, 20, 22, 25-30, 33-39 and 42 as dependent from a rejected base claim. Claims 3, 14, 19, 22, 25 and 33 have been amended to form independent claims. Since claims 4-11, 15, 16, 20, 26-30, and 34-39 depend therefrom, it is submitted that at least claims 3-11, 14-16, 19, 20, 22, 25-30 and 33-39, as well as claims 17 and 18 which have been amended to depend from claim 14, are in condition for allowance.

Summary

It is submitted that the cited prior art references , taken individually or in combination, do not teach or suggest the features of the present claimed invention. Thus, it is submitted that claims 1-46 are in a condition suitable for allowance. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: 8/6/04

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